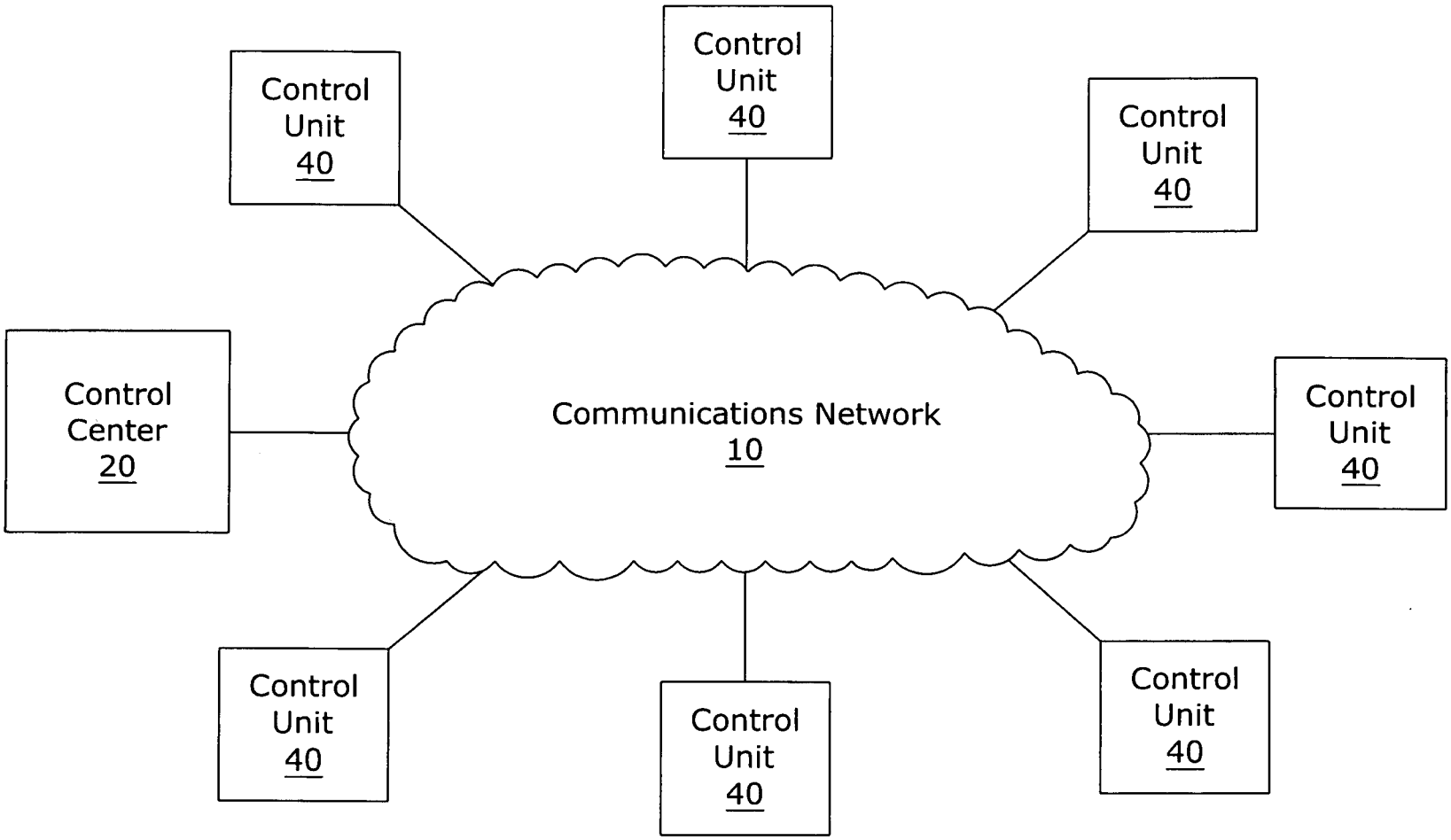

Control Unit 40
Control Unit 40
Control Unit 40
Control Center 20
Communications Network 10
Control Unit 40
Control Unit 40
Control Unit 40
Control Unit 40

FIG. 1

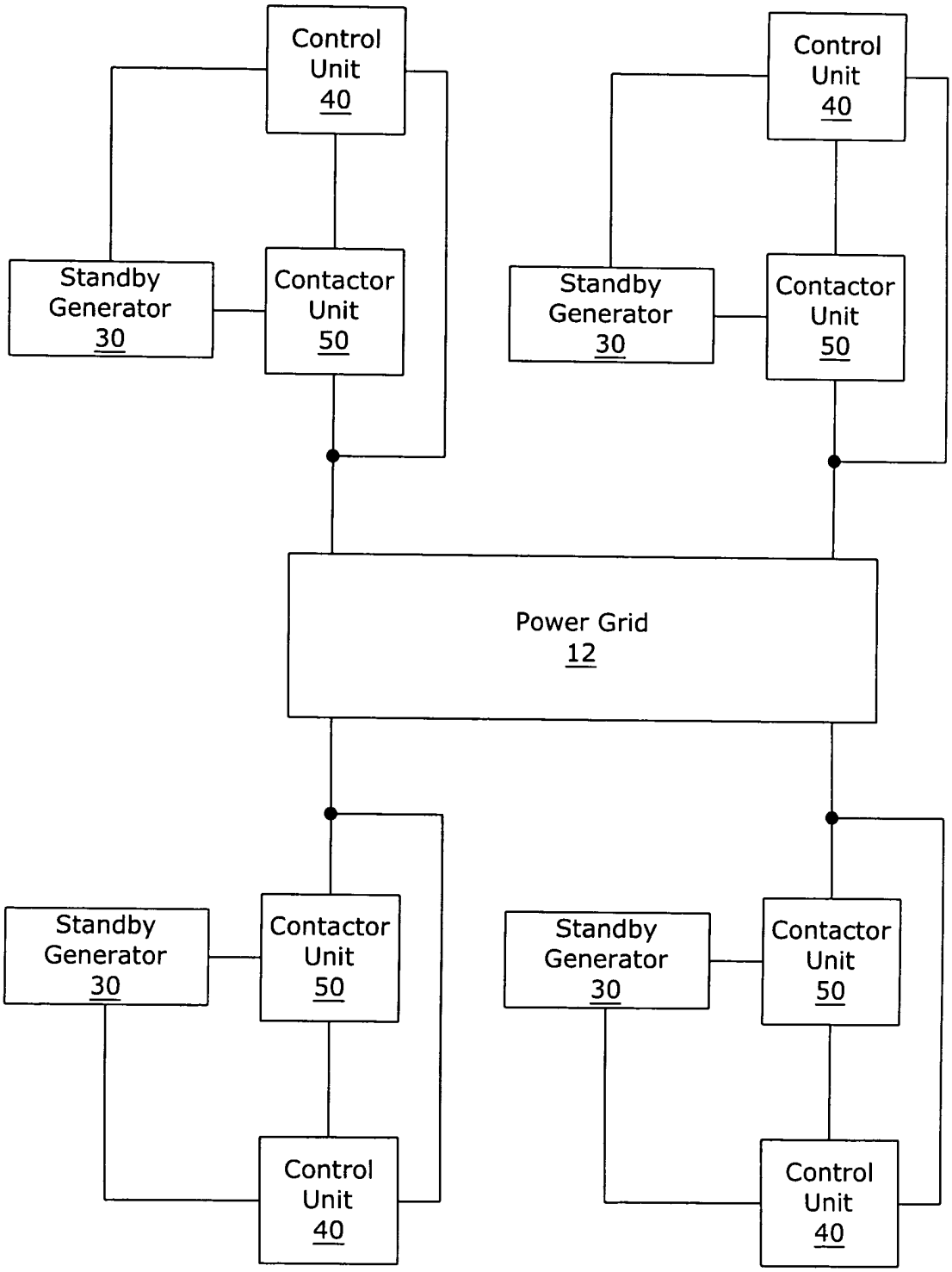

Control Unit 40
Control Unit 40
Standby Generator 30
Contactor Unit 50
Standby Generator 30
Contactor Unit 50
Power Grid 12
Standby Generator 30
Contactor Unit 50
Standby Generator 30
Contactor Unit 50
Control Unit 40
Control Unit 40

FIG. 2

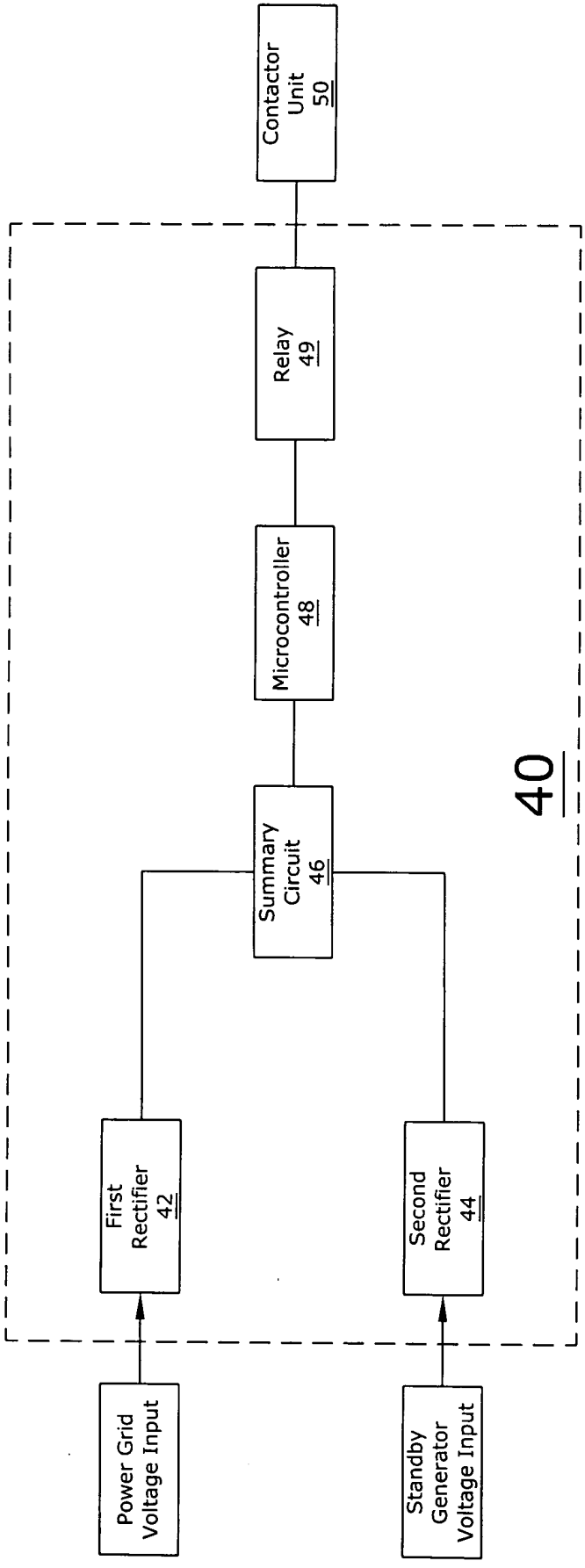

Power Grid Voltage Input
Standby Generator Voltage Input
First Rectifier 42
Second Rectifier 44
Summary Circuit 46
Microcontroller 48
Relay 49
Contactor Unit 50
40

FIG. 3

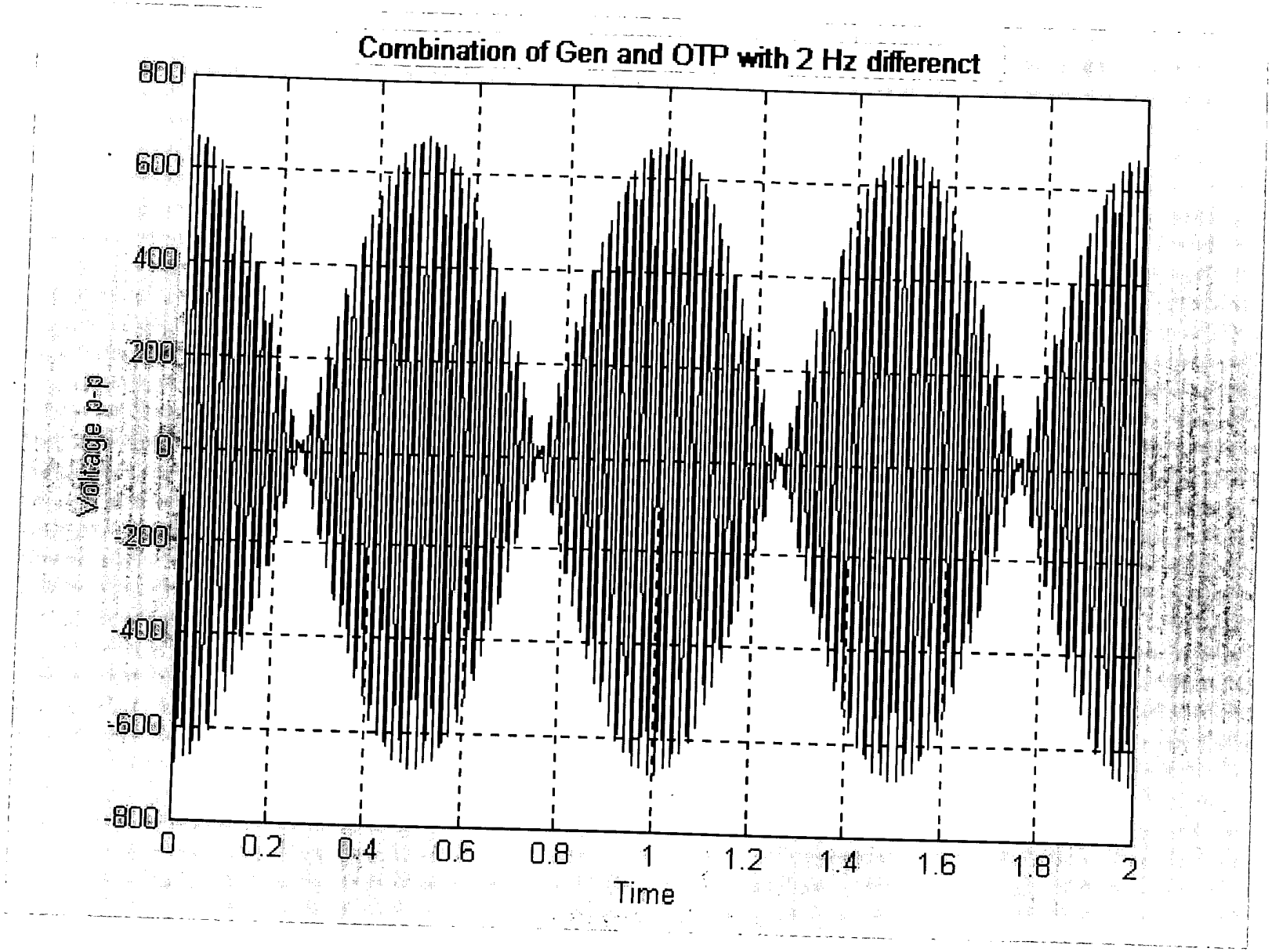

Combination of Gen and OTP with 2 Hz differenct
800
600
400
200
0
-200
-400
-600
-800
Voltage p-p
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Time

FIG. 4

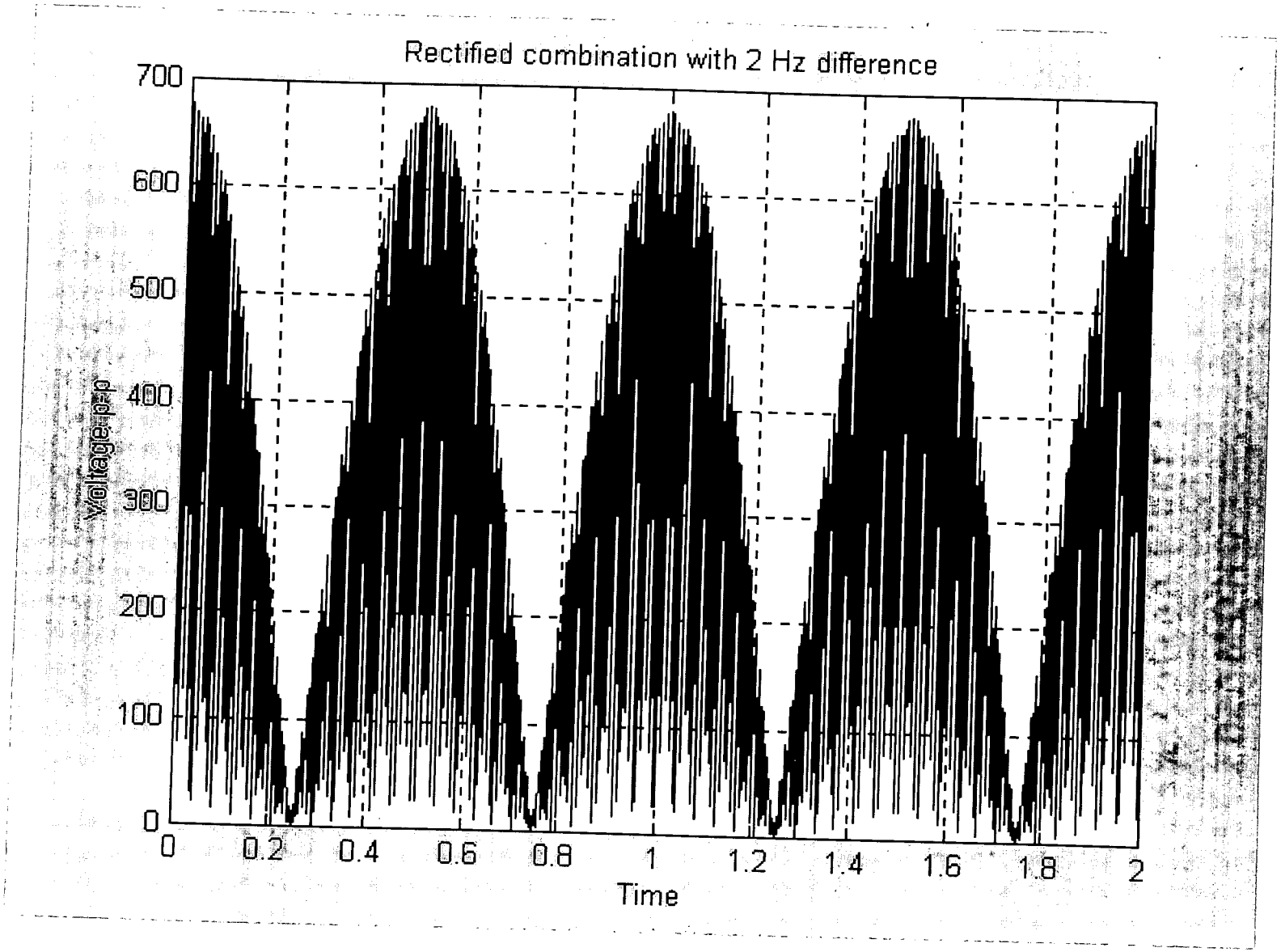

Rectified combination with 2 Hz difference
700
600
500
400
300
200
100
0
Voltage, p-p
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Time

FIG. 5

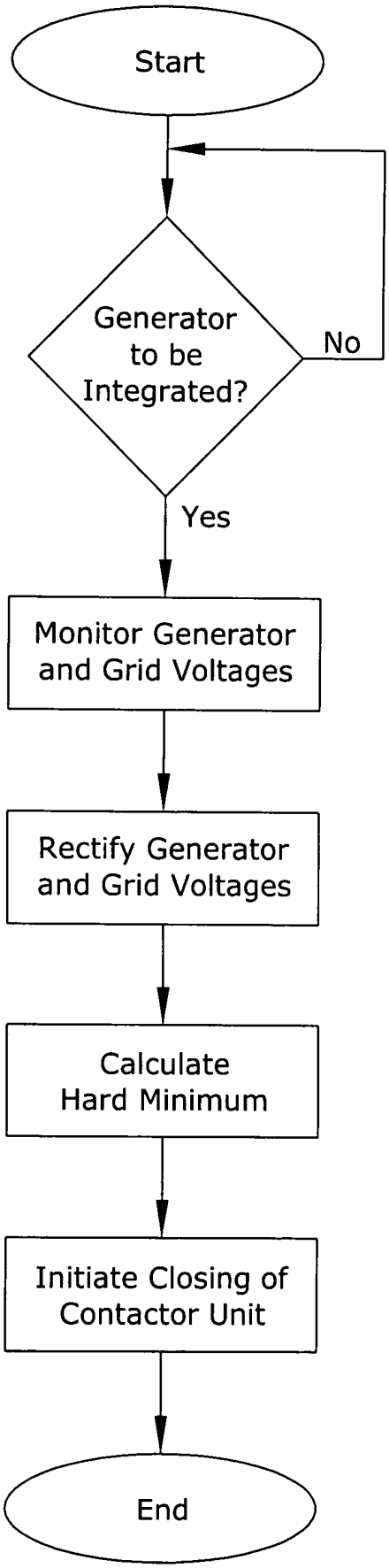
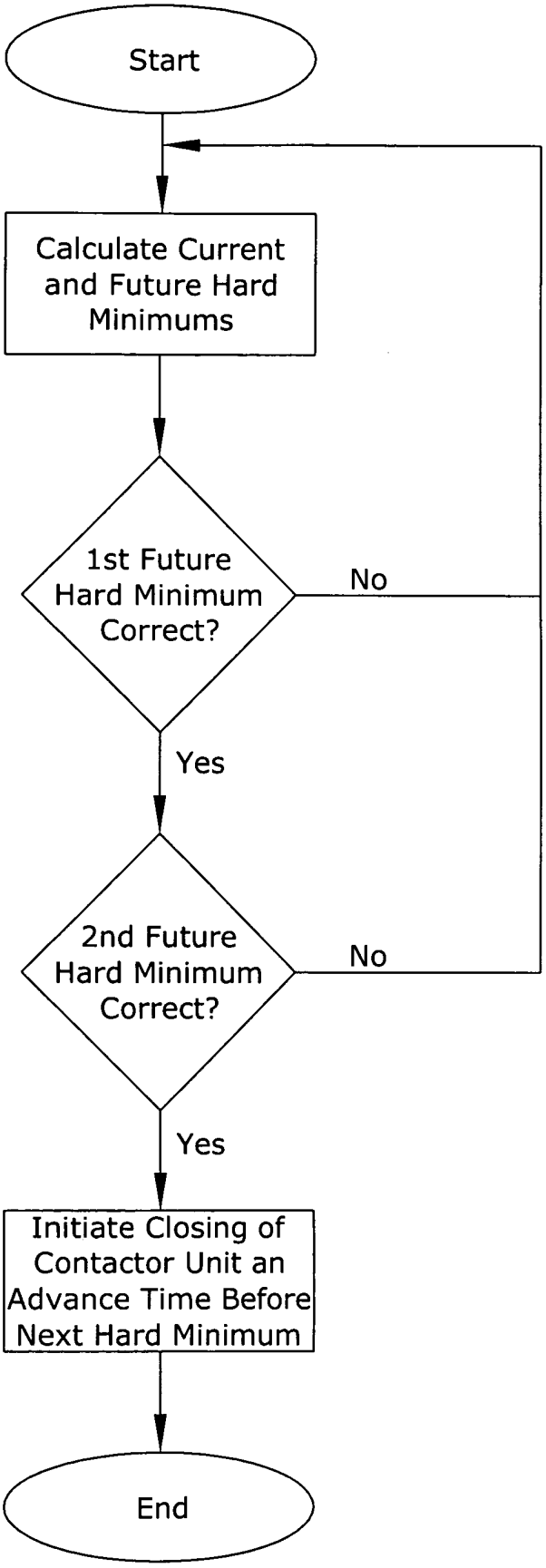
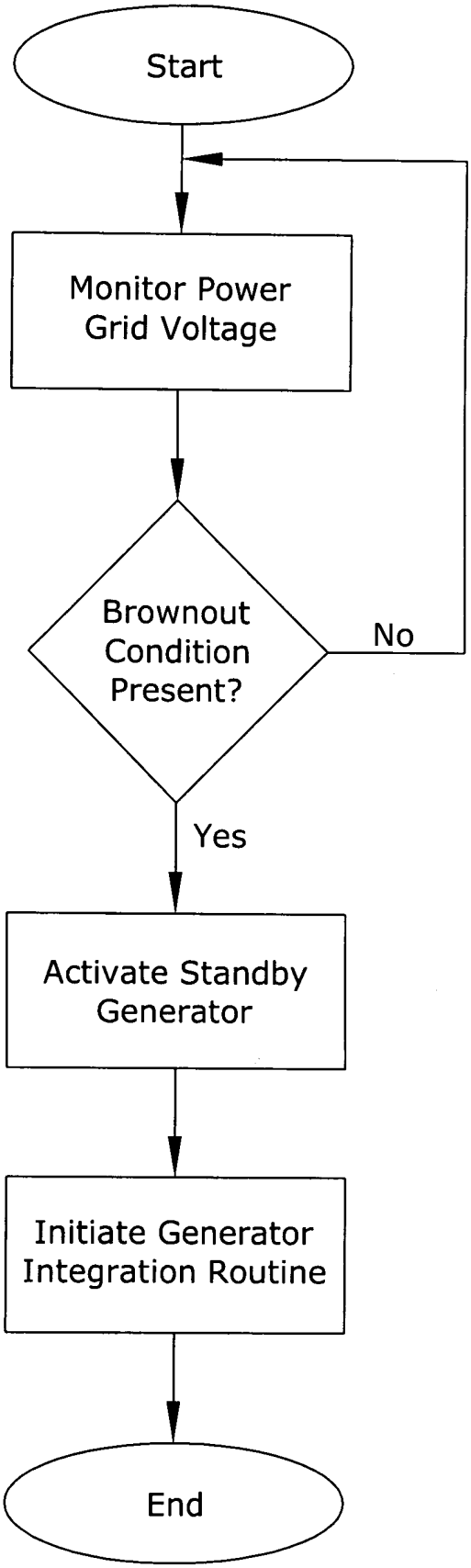

Start
Generator to be Integrated?
No
Yes
Monitor Generator and Grid Voltages
Rectify Generator and Grid Voltages
Calculate Hard Minimum
Initiate Closing of Contactor Unit
End

FIG. 6



Generator Integration Routine

FIG. 7



Brownout Condition Routine

FIG. 8